

19. (New) A method for manufacturing an aluminum cast product enclosing a pipe inserted therein, which comprises the steps of:

projecting a controlling member into a cavity of a mold;

arranging a pipe at a predetermined position in said cavity of said mold;

holding a portion of said pipe in the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

inserting said controlling member into at least one opening of said pipe or insertion of at least one end of said pipe in to a hole of said controlling member; and

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens.

20. (New) A method for production of aluminum cast product enclosing a pipe therein, which comprises the steps of:

coupling a bracket having a hole to a pipe;

arranging said pipe at a predetermined position in a cavity of a mold;

holding a portion of said pipe in the cavity by receiving the portion of said pipe in a groove of a core member, a portion of the core received within the cavity;

inserting a controlling pin, which extends through a wall of the mold to the said cavity, into said hole of said bracket; and

pouring a molten aluminum alloy into said cavity so as to enclose said pipe with said aluminum alloy, wherein said pipe is free to move in an axial direction relative to said mold until said aluminum alloy hardens.